

**NINDS CDE Notice of Copyright
Pittsburgh Sleep Quality Index (PSQI)**

Availability:	Please visit this website for more information about the instrument: PLEASE CLICK HERE FOR INSTRUMENT
Classification:	Supplemental
Short Description of Instrument:	<p>Summary/Overview of Instrument: A self-rated questionnaire that primarily assesses nighttime sleep problems. It focuses on sleep experiences over the past month. It has 19 self-rated questions and 5 additional questions for a bed partner or roommate.</p> <p>Construct measured: Sleep quality, sleep habits and sleep disturbances. Seven component scores: subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping medication, daytime dysfunction</p> <p>Generic vs. disease specific: Has been used in many different populations; it is not disease specific.</p> <p>Intended use of instrument/purpose of tool: Can be used as a screening instrument for nighttime sleep disturbance or for clinical studies. It cannot be used to diagnose specific sleep disorders, but instead may help distinguish “good” versus “poor” sleepers.</p> <p>Means of administration: Paper and Pencil</p> <p>Location of administration: Clinic, Home</p> <p>Intended respondent: Patient (with 5 supplemental questions for a bed partner or roommate)</p> <p># of items: 24 (19 self-rated items, and 5 supplemental items to be rated by a bed partner or roommate)</p> <p># of subscales and names of sub-scales: 7 – Subjective sleep quality, sleep latency, sleep duration, habitual sleep efficiency, sleep disturbances, use of sleeping</p> <p>Strengths: Extensive literature of its use in other populations. Includes a number of questions for bed partners (though these are not comprehensive and are not used in the scoring.)</p> <p>Weaknesses: Primarily assesses nighttime sleep problems; wording might be confusing; does not directly address changes in circadian rhythms (sleep time shifting to the day and awake all night) that clinically is often observed in HD patients; the wording of certain questions is likely problematic for patients with HD and measures other constructs such as mood or motivation, e.g., “during the past month, how much of a problem has it been for you to keep up enough enthusiasm to get things done.”</p> <p>One study (Aziz et al., 2010) in an HD population found the education, daytime dysfunction SCOPA-S more internally consistent, and much easier to score and use than the PSQI. The scoring algorithm is unusually complex.</p> <p>Translations available: It has been translated in over 56 languages, according to the University of Pittsburgh Sleep Medicine Institute website where these versions can be requested.</p>

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Scoring:	<p>Scoring: Seven component scores are calculated, each scored from 0 to 3, the total score ranges from 0 to 21, with higher scores indicating more severe sleep problems in many areas. Scoring requires following closely a complex algorithm and is not a simple summation of answers. A cutoff of 5/6 for the total score is used in general populations to distinguish between “good” and “poor” sleepers. Scoring can be time consuming.</p> <p>Standardization of scores to a reference population (z scores, T scores, etc): The PSQI scores are not standardized to a particular population but this instrument has been used in many different populations</p> <p>If scores have been standardized to a reference population, indicate frame of reference for scoring (general population, HD subjects, other disease groups, etc). (See above.) While the scores are not standardized to a particular reference population, the cutoff of 5/6 for “good” versus “poor” sleepers was developed from general population samples and thus it may not carry over as the best screening cutoff for specific populations such as HD subjects.</p>
Psychometric Properties:	<p>Reliability: Test-retest or intra-interview (within rater) reliability (as applicable): The Pearson correlation coefficient for test-retest reliability in a non-HD population was 0.87 and is stable over time (Högl et al., 2010). Inter-interview (between-rater) reliability (as applicable): not available in reviewed references Internal consistency: A Cronbach’s alpha of 0.72 was found in a one HD study (Aziz et al. 2010); Cronbach’s alphas of between 0.80 and 0.83 have been reported for the PSQI in different studies of non-HD populations.</p> <p>Validity: Content validity: Not available in reviewed references Construct validity: In the original study, the instrument successfully discriminated between clinical populations of good sleepers (normal healthy controls) and patients from a sleep evaluation clinic. In a HD sample, the measure correlated highly with another sleep measure, the SCOPA-SLEEP.</p> <p>Sensitivity to Change/ Ability to Detect Change (over time or in response to an intervention): Unknown</p> <p>Known Relationships to Other Variables: Not available in reviewed references</p> <p>Diagnostic Sensitivity and Specificity, if applicable (in general population, HD population- pre-manifest/ manifest, other disease groups): Not useful for diagnosis of sleep disorders</p>
References:	<p>Key Reference: Buysse DJ, Reynolds CF, Monk TH, Berman SR, Kupfer DJ. Psychiatry Research 1989; 28:193-213.</p> <p>Other References: Videnovic A, Leurgans S, Fan W, Jaglin J, Shannon K. Daytime somnolence and nocturnal sleep disturbances in Huntington disease. Parkinsonism and Related Disorders 2009; 15:471-4.</p> <p>Aziz NA, Anguelova GV, Marinus J, Lammers GJ, Roos RAC. Sleep and Circadian rhythm alterations correlate with depression and cognitive impairment in Huntington’s disease. Parkinsonism and Related Disorders 2010; 16:345-50.</p>